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10/006,679	12/10/2001	Takeshi Araki	401502	1583

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EXAMINER

SHEEHAN, JOHN P

ART UNIT

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 7

Application Number: 10/006,679
Filing Date: December 10, 2001
Appellant(s): ARAKI ET AL.

Mr. Jeffrey A. Wyand
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 1, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The Examiner agrees with appellant's statement that claims 1 and 2, all the claims on appeal, stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,676,998	Araki et al.	10-1997
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(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 and 2 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Araki et al. (Araki, US Patent No. 5,676,998).

Araki teaches a thin film magnet having a composition that overlaps the alloy composition recited in applicants' claims (column 2, lines 47 to 55) and specific example alloys having a composition encompassed by applicants' claims (see Araki's Tables 5 to 7). Araki teaches that the main phase of the alloy is $\text{Nd}_2\text{Fe}_{14}\text{B}$ (column 2, lines 50 to 51) as recited in appellants' claims. Araki teaches that the C-axis of the alloy film is oriented normal to the film plane (column 6, lines 25 to 27). This orientation of the C-axis taught by Araki is considered to be encompassed by the appellants' claim language "having a c-axis oriented in a film-thickness direction" (claim 1, line 2). Araki teaches that the disclosed thin film is made by physical vapor deposition onto a substrate while heating the substrate (column 2, lines 60 to 67). Araki teaches specific examples wherein the alloy composition and the substrate temperature are encompassed by the substrate temperatures disclosed in the instant application and the alloy composition recited in the instant claims (for example, compare Table 2 of the instant application to the compositions and substrate temperatures in Araki's Table 7).

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The claims and the Araki differ in that Araki is silent with respect to the presence of an amorphous phase, the amorphous phase isolating the $\text{Nd}_2\text{Fe}_{14}\text{B}$ phase and the process limitation that the temperature of the front side of the substrate is controlled within $\pm 2^\circ\text{C}$.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the specific example alloy compositions taught by Araki are encompassed by the instant claims and are made by the same process, including heating the substrate to the same temperature as disclosed in the instant application and therefore one of ordinary skill in the art would expect that the products taught by Araki would be the same as applicant's claimed product, including the presence of an amorphous phase and the amorphous phase isolating the $\text{Nd}_2\text{Fe}_{14}\text{B}$ phase.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

With respect to the process limitation that the temperature of the front side of the substrate is controlled within $\pm 2^\circ\text{C}$ it is the Examiner's position that a process limitation recited in the instant product by process claims does not necessarily lend patentability to the claimed product, MPEP 2113.

(11) Response to Argument

Appellants argue that Araki's thin film magnet cannot suggest the appellants' invention as defined in appellants' claim 1 in that Araki is directed to the thin film microstructure of Figures 1 and 3 of the instant application. This is not persuasive. Throughout appellants' brief, appellants refer to Figures 1 and 3 as depicting the microstructure of Araki's thin film magnet and compares these figures with figures depicting the instantly claimed invention. Although in the specification appellants describe Figures 1 and 3 as depicting conventional thin film magnets, appellants have not established in any way a nexus between the thin film magnets depicted in Figures 1 and 3 and Araki's thin film magnets, that is, appellants have not established that the microstructures depicted in Figures 1 and 3 in fact represent the microstructure of Araki's thin film magnet. Accordingly, since appellants have not established a nexus between Araki and Figures 1 and 3 of the instant specification appellants' arguments relying on Figures 1 and 3 of the specification are given little, if any, weight.

On page 4 of their brief appellants state that the reference and the instant application are commonly assigned and that Mr. Araki is the first named inventor of the reference and the instant application and is thoroughly familiar with the applied prior art reference as well as the difference between the claimed invention and the prior art. Applicants' then proceed to discuss Figures 2, 13 and 20 as representing the instant invention and Figures 3 and 19 as representing the prior art. This is not persuasive. Although Mr. Araki may be familiar with the prior art and the instant invention does not mean that appellants' unsubstantiated allegations, for example that Figures 3 and 19

represent the applied reference's thin film magnet, must be taken at face value by the Examiner without supporting evidence or at the very least in the form of an affidavit. Again, appellants have not established that Figures 3 and 19 in fact represent the thin film magnets taught by the applied reference, Araki. Therefore any comparison or arguments based on Figures 3 and 19 are given little, if any, weight. Further, appellants while stating that a comparison with of Figures 3 and 19 to Figures 2 and 20 demonstrates the difference between the invention and prior art have not pointed out and explicitly explained how such a comparison demonstrates the difference between the invention and prior art.

Appellants argue that the control of the substrate temperature within a range of $\pm 2^{\circ}\text{C}$ as recited in the instant product by process claims results in an alloy structure that is different from the alloy structure of Araki's alloy, that Araki does not teach controlling the substrate temperature within a range of $\pm 2^{\circ}\text{C}$ and that in view of Araki not teaching controlling the substrate temperature within a range of $\pm 2^{\circ}\text{C}$ it is impossible for Araki to produce a thin magnetic film having the structure recited in appellants' claims. This is not persuasive. For the reasons set forth above in the preceding paragraph appellants are not considered to have presented any probative evidence to support their position. Thus, in the absence of any probative evidence, applicants' arguments are considered to be unsubstantiated allegations. "It is well settled that unexpected results must be established by factual evidence. Mere argument or conclusory statements in the specification do not suffice." *In re Deblauwe*, 222 USPQ 191, 196 (Fed. Cir. 1984). Mere lawyer's arguments and conclusory statements in the specification, unsupported

by objective evidence, are insufficient to establish unexpected results.” In re Wood, Whittaker, Stirling and Ohta, 199 USPQ 137, 140 (CCPA 1978).

Appellants argue that graph labeled as “Conventional” in Figure 18 of the instant application shows that in Araki’s process the temperature of the substrate on which the thin film magnet is deposited fluctuates beyond the $\pm 2^{\circ}\text{C}$ recited in appellants’ claims and that because of this temperature fluctuation the thin film magnet structure in Araki’s process has the structure depicted in Figure 3 and not the structure recited in appellants’ claims. This is not persuasive. Appellants have not established that the “Conventional” process in Figure 18 of their specification is, in fact, Araki’s process, that is, appellants have not established a nexus between the “Conventional” process of Figure 18 and Araki. In view of this lack of a nexus between the “Conventional” process of Figure 18 and Araki appellants’ arguments are given no weight.

In summary, it is the Examiner’s position that Araki teaches;

(1) Specific examples of thin film magnets having alloy compositions that are encompassed by the thin film magnet alloy composition recited in the instant claims.

(2) A process of making thin film magnets that differs from the process recited in appellants’ product by process claims only by the feature that while heating the substrate on which the thin film magnet is deposited appellants’ product by process claims recite “controlling the temperature of the front side of the substrate within a range of $\pm 2^{\circ}\text{C}$ ”.

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That because the specific example alloy compositions taught by Araki are encompassed by the instant claims and are made by the same process, including heating the substrate to the same temperature as disclosed in the instant application one of ordinary skill in the art would expect that the products taught by Araki would be the same as applicant's claimed product, including the presence of an amorphous phase and the amorphous phase isolating the $\text{Nd}_2\text{Fe}_{14}\text{B}$ phase.

In view of this, the burden shifts to appellants to show that the claimed product actually is different than Araki's product, MPEP 2113.

ONCE A PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS FOUND AND A 35 U.S.C.102/103 REJECTION MADE, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBTAINABLE DIFFERENCE

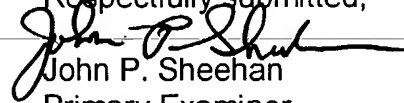
"The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature " than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983) (The claims were directed to a zeolite manufactured by mixing together various inorganic materials in solution and heating the resultant gel to form a crystalline metal silicate essentially free of alkali metal. The prior art described a process of making a zeolite which, after ion exchange to remove alkali metal, appeared to be "essentially free of alkali metal." The court upheld the rejection because the applicant had not come forward with any evidence that the prior art was not "essentially free of alkali metal " and therefore a different and unobvious product.).

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The Examiner contends that appellants have not met this burden in that appellants have not established any nexus between the data in the specification depicting "conventional" prior art and Araki. Accordingly, appellants' arguments relying on the data in the specification depicting the "conventional" prior art are not persuasive relative to Araki.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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Primary Examiner
Art Unit 1742

jps

June 4, 2004

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